Model Staff Duty Descriptions

Because of the multidisciplinary nature of a seismic safety advisory board's work, it will require the assistance of skilled professionals in a number of areas of expertise. If the board's fiscal and organizational means are limited, it may be necessary to rely on the technical and professional resources of other public-sector or private-sector agencies. However, the board can expect at some point to require assistance for the following professional and technical functions. They can be performed by full-time staffers, who *may perform more than just one of these functions*, or by professionals employed by outside agencies or entities who serve the board as a collateral function of their primary employment.

Legal Counsel

In addition to dealing with technical disciplines like engineering, seismology, and geology, the board will occasionally need legal advice.

For example, recent Supreme Court decisions expanded the economic rights of property owners impacted by regulatory action. When mandating seismic risk reduction measures for private property, State and local governments will need to craft risk reduction strategies that do not compromise the Constitutional principle of due process or violate the prohibition against taking of property without compensation. The board should ensure that seismic risk reduction policies and procedures are based on sound judgment and due process, intended to protect both the public safety and the economic rights of property owners.

Although design professionals have the capability to design and construct buildings that resist earthquakes, the tort liability issue has inhibited innovation in the retrofitting of vulnerable buildings and the development of seismically resistant new buildings. Proper building practices, retrofitting collapse-hazard buildings and innovative structural designs and components in new buildings, reduce earthquake-related casualties. The board may need to develop a clearly defined tort liability benchmark to give local governments and design professionals when their professional judgment calls for deviation from existing building codes.

Such concerns may require the advice of a legal counsel, to study questions of regulatory due process and state and private-sector liability and to recommend changes to promote earthquake risk management. Moreover, legal counsel can provide the board with legal advice on contracts and interagency agreements, including contracts for grant funds, program-related services, administrative service contracts, and interagency agreements. In addition to advising the board and its staff, a legal counsel familiar with seismic safety issues also may be valuable in legislative matters, e.g., bill tracking and analysis, drafting amendments, consulting with board committees and other interested parties, making presentations, reviewing position letters.

Engineering Geologist

Earth scientists have long recognized the importance of their disciplines in identifying and avoiding or reducing earthquake hazards. Ample evidence correlating surface geology with earthquake damage has demonstrated that earth science must be better reflected in government policies aimed at reducing the effects of earthquakes on buildings, bridges, roads, and

pipelines. To carry out its responsibilities relating to the earth sciences, the board may need an experienced engineering geologist with sound judgment and recognized credibility, who can independently interact with professional peers, management-level employees of state agencies, legislators and their staffs, and local government officials. In addition, an articulate engineering geologist may prove invaluable in explaining the intricacies of earthquake-related hazards to the press, the public, and policymakers.

An engineering geologist can provide the board with a focus on "real time" geological processes, their effects on buildings already built or to be built, geological concerns regarding lifelines (gas and water pipelines, electrical distribution systems), transportation systems, and similar issues involving the interaction of manmade facilities and the terrain they rest on. Good geological advice may be particularly important in energy-producing regions where oil and gas exploration, development, and extraction may be significant issues. The Engineering Geologist would also be able to advise the board on seismic safety policy in the disciplines of geophysics, seismology, geology, and engineering geology, as well on policies relating to electric, water, and gas supply systems. Moreover, an engineering geologist may prove quite valuable in making policy recommendations to mitigate earthquake-caused landslide, ground failure, liquefaction, dam failure, and tsunami hazards, and on ways of incorporating these policies into local and-use planning, subdivision control, and building regulations.

An engineering geologist, can also serve as the board's liaison with the Legislature and organizations such as the US Geological Survey and the National Science Foundation's Division of Earth Sciences on earth science issues, as well as working with local and state government geologists to improve understanding of seismic hazards in local government planning and regulation of development. Moreover, such help may prove invaluable in evaluating earthquake predictions for governmental leaders, the news media, and the public, helping separate scientifically based forecasts from those that are not.

Structural Engineer/Architect

A structural engineer, or architect with structural knowledge, can help with design-related matters, such as earthquake-related architectural and engineering programs, and building codes and standards affecting historical buildings, common structures and buildings, as well as schools, emergency service facilities, and hospitals.

Such services may be particularly useful in preparing, analyzing and recommending legislation related to building stock vulnerability, earthquake engineering, structural design and architecture, as well as working with building codes and building officials. Design information, perspectives and judgments on staff work having earthquake design components, retrofit and damage repair would aid in report preparation and policy recommendations. A structural engineer or architect could also provide staff liaison between the board and professional organizations representing engineering, architecture and other related disciplines, and local, state, and federal agencies, as well as the Legislature.

The structural engineer or architect should be certified by the appropriate licensing board, and have adequate practical experience in earthquake-related engineering, including dynamic analysis of structures, earthquake damage assessment, seismic hazard mitigation and post-quake repair, building codes and standards, research, government review and permit procedures. He or she should also have participated in organizations such as

the Earthquake Engineering Research Institute (EERI), and the American Institute of Architects (AIA) and be knowledgeable of the Federal Emergency Management Agency (FEMA) and the National Science Foundation (NSF).

Legislative Liaison

The board will probably consider legislation related to earthquake risk reduction, building codes, the geotechnical sciences, the engineering and design professions, planning, local government, emergency response and post-earthquake recovery. It may prove worthwhile to use a specialist for legislative tasks.

These tasks typically include collecting information and securing expert testimony, as well as bill tracking and analysis, drafting amendments, testifying at legislative committee hearings, consulting with board's committees and other interested parties, and making presentations. The Legislative Liaison could draft letters for the board to send to the Governor and the Legislature supporting or opposing legislation, as well as formulating recommendations on pending legislation.

The legislative liaison should have experience in planning, program evaluation, or policy analysis, and be able to deal with complex governmental problems. He or she should be able to effectively consult with and advise administrators or other interested parties on earthquake-related issues, gain and maintain the confidence and cooperation of those contacted, and effectively advocate the board's position on pending legislation before legislative and other committees.

Emergency Response Specialist

A major catastrophic earthquake will impose heavy demands on emergency responders, probably exceeding capabilities and resources. Consequently, the board should focus some of its attention on ways to strengthen emergency response. This may require a specialist who would be responsible for emergency response planning. A comprehensive, multi-hazard, emergency management system should coordinate the response elements of local, state, and federal governments with volunteer and private sector resources. The board can help formulate improvements in statewide emergency response capabilities and organization, and recommendations to commit time and resources on training and testing plans for future emergencies. The failure to make such investments could leave states and local communities vulnerable.

Recovery Specialist

Financial issues critical to the restoration of an earthquake-damaged area's economy and public services may have to be addressed. The board may need the advice of a recovery specialist regarding recovery programs, priorities, legal processes, financing, insurance, and disaster aid. Through advanced planning, the board can better understand the need for outside resources and aid during the recovery phase, and determine beforehand what must be done to get assistance. After a disaster, pressure mounts to rebuild immediately, without adequately thinking through the long-term implications and consequences. The services of a recovery specialist may facilitate advance recovery planning and help ensure a more thoughtful, methodical, and production recovery process

Public Information Officer

The board may require a public information officer to write, edit, and prepare information and material for dissemination through all major media and devise a public information campaign. Typically the officer will also

prepare replies to difficult and complicated correspondence, and act as spokesperson for the agency with public groups, news media, and individuals inquiring about board activities. This may also include arranging the participation of board members or staff personnel as speakers before public groups, or on radio and television newscasts or other programs.

Research Writer/Editor

The board may need a research writer/editor to manage the publications program (if any). These responsibilities may entail publishing a variety of documents—legislatively mandated and other reports, brochures, transcripts, guidebooks, and more—that require professional expertise to write, edit, and produce. A research writer/editor can assist the board by preparing such reports and presentations, summarizing research findings and their applicability to seismic risk reduction and management. Moreover, this staff member may also prove necessary to develop and disseminate information on seismic safety to various audiences such as professional associations, as well as preparing press releases and responding to media inquiries.

Planner/Program Analyst

The board may very likely decide to establish a risk reduction and management program, that sets forth priorities, funding sources and amounts, project schedules, and risk reduction activities needed to significantly reduce earthquake risk. Implementing the specific risk reduction activities of such a program may require a planner or program analyst to promote, monitor, and integrate the ongoing earthquake risk reduction, emergency response, and disaster recovery projects comprising such a program, as well as the accomplishment of numerous specific program milestones.

The program manager would advocate an ambitious agenda requiring the cooperative and active participation of diverse organizations and agencies. Progress on a number of activities will require action by both the governor and the legislature to establish policy assigning new responsibilities, granting new authority, and appropriating additional fiscal resources. The program manager could participate in and monitor the process of implementing of such a program. Such a person can function as a facilitator to integrate activities, coordinate individual actions, and assist the primarily responsible agencies in every possible way.

Administrative Manager

If the board's staff becomes large enough, or if it administers numerous contracts, it may benefit from an administrative manager responsible for its administrative functions. An administrative manager's duties might also include the more difficult work in the areas of personnel, budgeting, contract administration, and managing the computer network, including determining its need for new equipment, software, and staff computer training.

It bears emphasis that such a position *may most likely only be warranted for boards with large staffs and significant programmatic responsibilities,* such as those that may confront a state with recurrent, periodic seismic activity or a consortium of states requiring integration of multi-state seismic safety activities over a broad geographic area.

Staff Analyst

As its programmatic responsibilities increase, the board may benefit from employing a staff analyst to assist in preparation of its annual budget and budget change proposals, and monitor its expenditures, prepare monthly budget forecasts and payrolls, and recommend expenditure alternatives to assure that the advisory board remains within its budget.

This staff member would also be an excellent choice to oversee the rental or leasing of office space, purchase of all goods and administrative services, and development of guidelines for routine purchasing activities to ensure compliance with appropriate purchasing procedures. He or she could also assist in drawing up contracts and interagency agreements, including contracts for program-related services, and oversee the day-to-day management of administrative service contracts and interagency agreements. Moreover, a staff analyst can advise the board on costs and applications of employee benefits, and coordinates the board's records management program.